

PILBEAM, JOHN 1995. *Gymnocalycium, A Collector's Guide*. (ISBN 90-5410-192 X, hbk). A.A. Balkema, P.O. Box 1675, 3000 BR Rotterdam, Netherlands (fax +31-10-4135947); A.A. Balkema Publishers, Old Post Road, Brookfield, VT 05036 (fax 802-276-3837). \$70.00. ix + 191 pp, 124 color photographs, 98 figures, 10 maps, 8" x 11".

Gymnocalycium is a favorite genus for amateur as well as professional collectors of cacti. It well meets the qualifications of an almost 'perfect' cactus in having many spines, often quite long, that are beautifully arranged in areolae, flowers that are often large, fragrant and very attractive and, most importantly, plant sizes and shapes that are easily accommodated in most collectors' facilities. This volume will be heartily welcomed by English speaking enthusiasts who, to this time, have had similar treatises available mostly in foreign languages.

Included in the book is a fine section on cultivation of these cacti, a review of the classification of *Gymnocalycium* species, mainly including a review of Schütz (1986) and Krainz (1968), but also providing, in Chapter 7, an annotated checklist of species and synonyms according to Hunt (1992). The discussion in the section on seed, fruit, flowers, and spines is very brief. I would have liked to have had a more detailed discussion on the fruit and seeds of *Gymnocalycium*, particularly the latter because of the importance placed on seed characters in formulating subgenera and sections of the genus. Scanning electron microscope photographs of seeds of a few species are provided but without much comment. Perhaps light microscope photographs of seeds of species showing differences in different subgenera would have been more useful.

The chapter on Geography and Distribution of *Gymnocalycium* is written by Metzger and translated by C. Walton. It is erroneously stated in this section that "The area inhabited by the genus *Gymnocalycium* is entirely in South America, and extends roughly from 18° N to 45° S.....". It is made clear, however, that the genus occurs no farther north than central Bolivia in South America, and does not occur as far north as the latitude 18° N which passes through Mexico, Jamaica and Puerto Rico. Locations of different species in each of the subgenera are illustrated on full-page maps.

A very short chapter is provided on "Discovery and collection of species in the wild" in which the maintenance of collectors' numbers by growers of *Gymnocalycium* is emphasized so that their origin is clearly identifiable. Chapter 8 lists 23 pages of numbers of collectors, giving localities for most in variable detail.

The glossary is aimed primarily at etymology of the species names, but the roots *gymno* and *calycium* are not explained. Books important to the taxonomy of *Gymnocalycium* are itemized in the Bibliography, but publishers names are not provided, making it difficult for the uninitiated to find them.

Chapter 6, containing a "Commentary on species," provides a description of each accepted species as well as those species that are 'provisional'. Two types of 'provisional' species are designated, those that may have been accepted in the past but now, for various reasons, "await resolution," i.e. *G. bayrianum*, and those that are previously undescribed or illegally described, i.e. *G. altagraciense*. Species that are considered in this volume to be synonyms are also listed and discussed. All itemized species in this section are well referenced, although some of the references are not listed in the Bibliography section. Each accepted and provisional species is illustrated with a color photograph of a flowering plant

as well as a close-up black and white photograph of areolae. Each accepted species is assigned to one of Schütz's subgenera and also to the series in which Buxbaum placed it. The descriptions include details of plant form and growth habits as well as flowers, fruits, and seeds. Comments on related species or past confusion of plants in cultivation are often made. Location of wild collections are listed and collectors numbers provided for each species.

My curiosity stimulated, and becoming a very small scale collector, I purchased seven unidentified plants, without flowers, appearing to be the genus *Gymnocalycium* from a local nursery, and have attempted to identify them using this book. The identification process required leafing through the book and comparing the descriptions and photographs with my plants. In about an hour and a half I have probably accurately identified two species, possibly three, but I must await flowering of the remaining plants to be able to try placing them in a species. A key to the subgenera and species would have made my task much easier and possibly more accurate.

Despite these limitations, this beautifully produced book is one that collectors of succulent plants, especially cacti, will require.—*Richard E. Norris.*

HENDERSON, ANDREW, GLORIA GALEANO, and RODRIGO BERNAL. 1995. **Field Guide to the Palms of the Americas.** (ISBN 0-691-08537-4, hbk). Princeton University Press, 41 William Street, Princeton, NJ 08540. \$75.00. 352pp, 256 color illustrations on 64 plates, 42 line drawings, 554 maps, 6"x 9".

As the guest author of the forward to *Field Guide to the Palms of the America*, Robin Foster makes two bold statements: "Amazing. I thought it would be another twenty years before something as useful as this came out ..." and "This book is a shot in the arm of the study of palms." I could not agree more. This field guide will impact the taxonomy, ecology and ethnobotany of palms well into the twenty-first century.

"But a field guide?" you say, "After all, the authors state at the outset, 'The Guide is not a taxonomic treatment but a field guide for nonspecialists'". However, the term "nonspecialists" is not restricted to school children and casual tourists; it includes anyone who is not involved in systematic research on a particular group, even the *Bactris* specialist who has never delved into *Copernicia* or other genera. It is intended to be used by *anyone* who needs to provide rapid, reasonably accurate identifications of palms seen, studied, or collected in the field: the ecotourist wanting to appreciate the ecosystem, the palm enthusiast collecting seeds for distribution through the International Palm Society, the tropical ecologist inventorying biodiversity and plant-animal interactions, the natural resource manager evaluating habitats, and the conservationist cataloguing endangered species for a worldwide database. What makes this Guide so significant is that, until now, the taxonomy of American palms had never been synthesized and simplified to bring order to all species in all genera and provide standard names among countries. In fact, only a handful of genera have been treated in modern comprehensive monographs and, thus, are not readily accessible to the nonspecialist.

Placing the species level taxonomy of American palms in historical perspective, the authors state in the Introduction: "It had been left by Barbosa Rodrigues, Burret, Bailey, and others in a chaotic state with literally hundreds of names and no way to apply them to real species in nature. ... Over the last decade a new generation of botanists, many of them